



CENTRO DE
MATEMÁTICA
UNIVERSIDADE DO PORTO

Geometry and Topology Seminar

A modified Hitchin base using quadratic multi-scale differentials

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Abstract. The complexity of the singular fibers of the Hitchin system stems from the diversity of singularities of spectral curves. Already for $G = \mathrm{GL}(2, \mathbb{C})$ all singularities of type A appear. In light of the Deligne–Mumford compactification of the moduli space of smooth projective curves, it is a natural idea to compactify the family of smooth spectral curves over the regular locus of the Hitchin base to a family of nodal curves over a modified Hitchin base. In the talk, I will compare several approaches to achieve this goal in the $\mathrm{GL}(2, \mathbb{C})$ -case. These motivate the consideration of the moduli space of quadratic multi-scale differentials with simple zeroes as modified Hitchin base. I will conclude by formulating a spectral correspondence in this context. This is joint work with Martin Möller.

Friday, November 19

15h30

Room 1.09

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